

BADDA RHIZOME_ REMODELLING THE NEIGHBOURHOOD

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abstract

Waterways are a vital and productive resource to our environment. They provide a variety of amenities and services to communities across the world such as drinking water, food, travel, recreation, wildlife habitat, connection to place, aesthetic appeal, economic development, etc. This thesis project examines the importance of the Gulshan Lake to its urban community and how lakefront design can function as a unifying element for the city center, its neighbourhood and its ecosystem. Over half of the world's future population will be living in urban environments by 2030, which will dramatically increase the stress on a vulnerable network of water systems. A restoration of a lake can bring awareness to people living around it while improving physical and ecological corridor connections (Bernhardt & Palmer, 2007).

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CHAPTER 01_ Background of the project

PROJECT BRIEF-

Dhaka is a hydrological city with a complex chemistry between the land and water. The city is surrounded by water that is our capital is almost acting like an island right at the heart of the country. Rapid urbanization is taking place in every part of the country and it has driven unplanned and bottom up process, which transforming the existing landscape without considering the possible consequences and requirement for environmental sustainability. These urban growths have profound adverse effects on the water resources, and timeline shows the changes in the water bodies inside Dhaka. Water edges act as a transition between the land and water and it is a place where encroachment, land-filling and geographical rearrangement occurs. South Badda has a spontaneously growth of urban-residential settlement with their own growth of commercial and mixed use development according to their own daily needs. It is a very important factor to create a proper architectural language in the water edges of the city. A few waterfront projects have been implemented already like Hatirjheel waterfront and the Gulshan waterfront is yet under development process. It is evident that there has been a slight awareness of the cruciality of these water bodies and their maintenance, restoration and presence in our city.

PROJECT INTRODUCTION-

Badda area is surrounded by Khilkhet on the north, Khailgaon on the south, Ruganaj on east, Gulshan, Cantonment and Rampura on the west and chained with the Gulshan Lake across the south edge. The specific zone where the project focuses on is South Badda which is a urban-residential area that is being positioned with a major part of the Gulshan-Badda lakefront. The study and survey area is between the arterial road facing the lake and the first lane of collector road and the area is 22.25 acres. Residents of South Badda are mostly serviceholders (both public and private), retailers, waiter, garment workers, carpenters etc. South Badda settlement has the presence of two schools that has been established for more than 25 years, Badda Alatumnesha School and Badda High School. They also have their own grocery shops (namely Gudara ghat bazaar and bou bazaar) and shops that sell their daily necessities of goods and services within the community. As the area being given a keen look, it can be noticed that there is a distinct difference between the urban growth, settlement density and usage of solids. The solids density of South Badda is almost five times more than that of Gulshan residential area with a building footprints almost half as that of Gulshan. The latter has this presence of offices, food centres and various shopping fused with the residential zone whereas South Badda area has been residential in terms of usage. There is an abrupt growth of housing and their own economic centres in the Badda neighbourhood; the dwellers have introduced elements and designed their neighbourhood according to their own needs and necessities. However, South Badda, in its own process of growth has lost the presence of open spaces, community hubs, green spaces and the lost physical and psychological connection with the Gulshan Lakefront.

A neighbourhood that has been evolved with time according to its own need needs to be thought of in a way where the community will gain their quality of life if their community spirit is revitalised. Living beside a lakefront gives South Badda a major possibility of regaining the balance in their lives and the urban morphology of the relationship between land and water. A chunk of neighbourhood with an area of 4.5 acres is selected within the study zone that has been remodelled with an attempt to provide some new visions for the Badda community. Rhizome is a philosophical concept developed by Gilles Deleuze and Felix Guattari, where it means “image of thought” based on the botanical rhizome which is a continuously growing horizontal underground stem. The remodeled area will act as a pilot project i.e. the rhizome that can be followed and modified with changes in space and needs to give the community of Badda the quality and standard of their lives that they deserve.

AIMS AND OBJECTIVES OF THE PROJECT-

Designing cities within their natural ecosystem is not only important because it forces civilizations to have environmentally friendly principles like stormwater management, sustainable design of buildings and landscapes, etc., but also because it provides contact with nature. Interaction with nature has been proven to enhance human well-being and development. According to Kellert (2005), “Human physical, mental, and even spiritual well-being relies on experiencing healthy and diverse natural systems” (2005, p. 9). When creating natural ecosystems within an urban setting, designing for interaction with nature will be a key element for a city’s success.

Although the reclamation of waterfront has spread out elsewhere, the theory of waterfront regeneration was far behind the practice. This paper aims to fill the research gaps and provide a holistic picture for waterfront development in our city, in Bangladesh’s context. A framework has to be provided to inform, guide and assess new development at waterfront locations throughout the Gulshan area to ensure that biodiversity issues are fully considered and addressed.

1. Provide an amenity for residents and visitors alike that will provide Gulshan lake with a vibrant urban centre for all ages;
2. Provide additional accommodation, activities and attractions for land-based and transportation through boating, that would add value to Gulshan lake’s transportation offering services, with the target of increasing people visiting this area.
3. Provide a safe neighbourhood for the residents of Badda.
4. Provide an attractive, appealing and high quality waterfront that will complement the rest of the town reflecting the city’s history and culture;
5. Create a warm and appropriate welcome to the city dwellers and also others who are visiting the city so that they chose to come and enjoy the lakefront.
6. Provide guidance on the ecological design of developments within waterway corridors
7. Identify opportunities for habitat enhancement, creation and restoration
8. Provide such amenities and development in the neighbourhood that enhances the standard and quality of the life of people living in Badda.

GIVEN PROGRAMS-

Community centre, Water taxi hub, Urban promenade, Food courts, Retail shops, Community garden, Jogging track, Bicycle track, Seating.

2.1 Site Appraisal

Gulshan is a commercial and residential area, originally meant for offices and embassies of diplomatic missions, as well as residences. The area has seen an upsurge, since mid-1990s, in the number of high-rise buildings, restaurants, residential areas, modern markets and ice-cream parlors which are open past midnight. The independent houses of early 1970s that stood far from each other in Gulshan area have vanished because of the commercial boom, to the point of old residents claiming it is not a residential area any more.

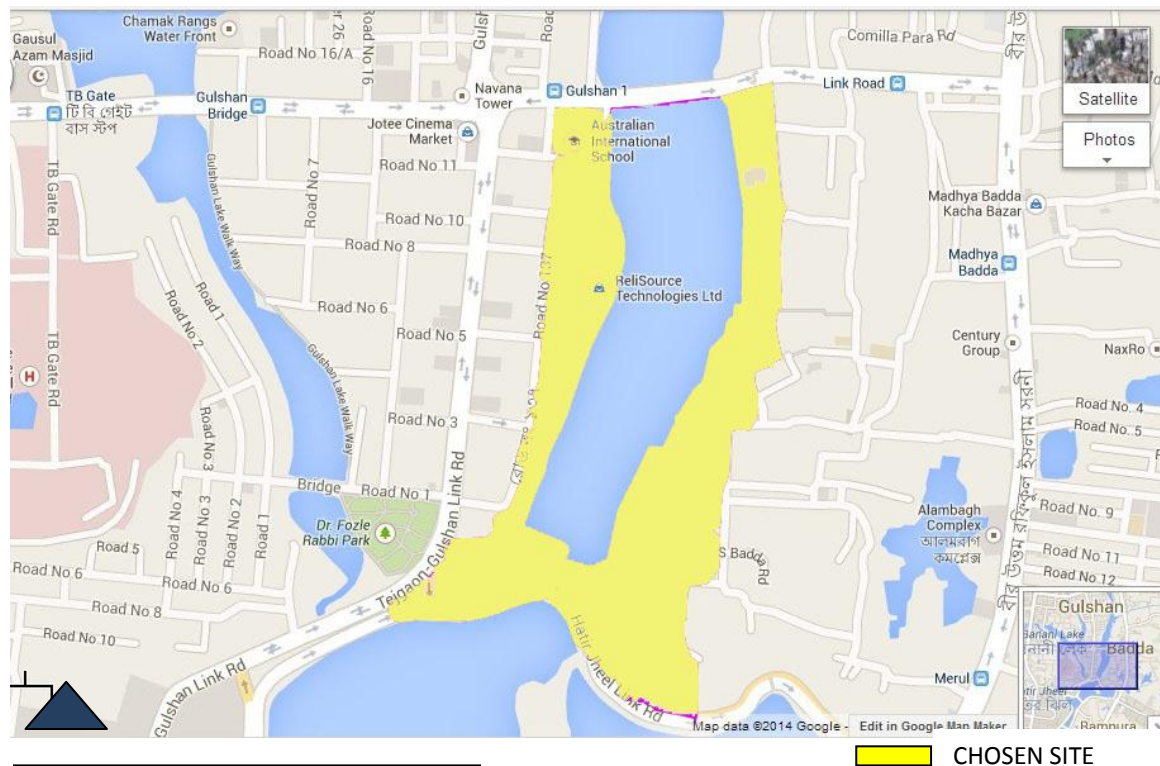


figure 2.1 site (google image)

The site that has been chosen is right at the termination point of the Gulshan lake that on the other hand almost meets the Hatirjheel lake along a part of its edge. The Hatirjheel is almost a developed lake with walkways, driveways, greenery and bridges that connects eskaton, moghbazar, gulshan etc. This part of the lake lies right between the Gulshan 1 road and Badda. A bridge connecting directly from Hatirjheel to Gulshan 1 is still under construction and currently there is a proposal of a 20' road that will be connecting to Hatirjheel to Badda.

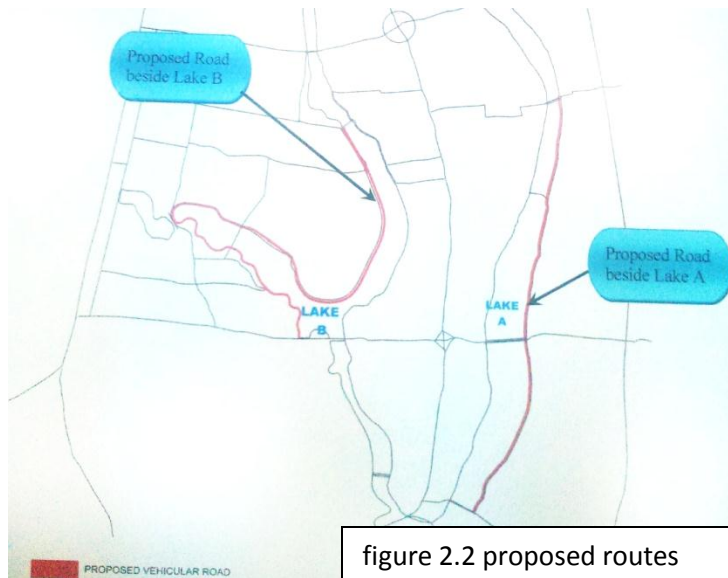


figure 2.2 proposed routes

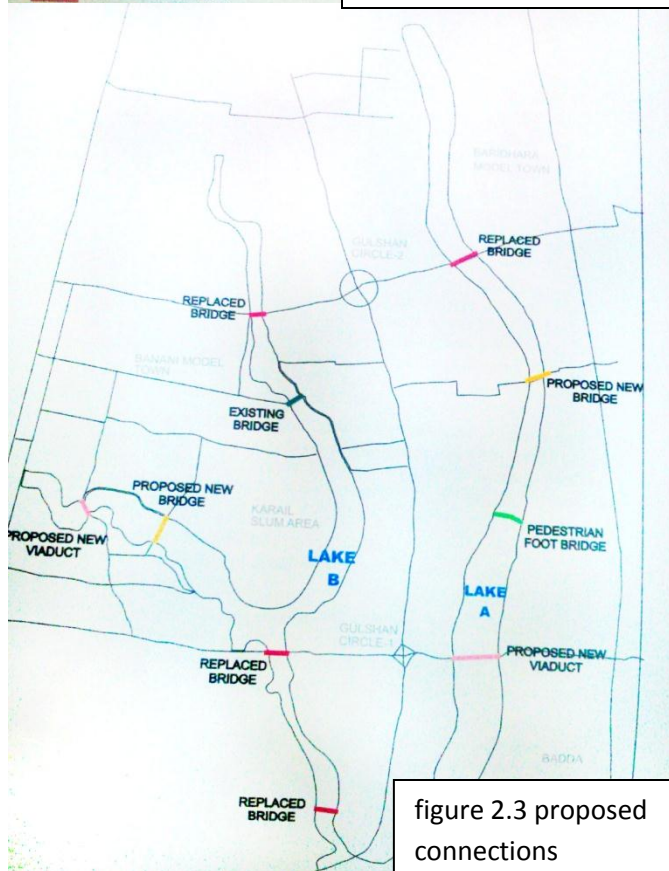


figure 2.3 proposed connections



figure 2.4 contour map

The two maps show the proposals by RAJUK that is a part of the Gulshan development lake project. The upper one shows the proposed vehicular roads and the lower one shows the proposed bridge, footbridge and viaduct

Right hand image-Contour map.

Gulshan lake has a lot of prevailing pollution problems because of rapid urbanization and loss of sociological balance. The lake water is not properly maintained and it has lost its clarity and nutrient balance. Flood water runoff flows into these water bodies practically turning these into buffer flood control reservoirs, except some pockets of transient water-logging. Drains and sewerage pipes dumping wastes in the Gulshan lake has been identified as major pollution problem by DWASA. The malodorous wastes tend to spill over when the roads are flooded. People do not come close to the water edge for

their refreshment and recreation because of the ill-maintenance and poor treatment by the people themselves. It's a vicious cycle of human intervention in the nature's own state and the extreme consequences of nature bouncing back on the human being themselves.

The site has a very clear distinction between two different classes of residents living on either sides of the lake. On the west side lives the upper and upper middle class residents of Gulshan 1 and on the east side lives the middle and lower income group of people of merul-badda.

The edge condition facing badda residents have a unpitched road of 20' and has a very negligible amount of greenery around it. This edge contains a ghat and two tongs including a series of carpentry and woodworks store. It is needless to say that these ghat , tong and wood stores are run by the lower income group of people living there and around other parts of merul badda as well. Children uses the road as their play area and recreation.

The edge condition facing the higher income group of people of Gulshan 1 on the other hand has a very narrow pedestrian route that is well paved. The route is about 5'. There is a tong in the either ends of this walkway and they serve as a common meeting place for the male working in the neighboring offices for example the Indian embassy and other corporate offices. There is however trees with wide canopy providing shade around these walkway but on the other hand this walkway does not have walkway light. As a result this route becomes inaccessible after dawn. Young people were also seen seating around the edge of this side of the lake once in a while. Extensive study has been done between the area of South Badda that is been bounded between the arterial road and the first lane of collector road. Studies include data about solids, structures and details about the regular life of the dwellers living in South Badda.

S.W.O.T. ANALYSIS

STRENGTH- The chosen part of the Gulshan lake is wider than any other parts and the water is more cleaner with a bit of flow. They proposed road by RAJUK which is now an unpitched road is quite wide to give a vista around the lake. There is presence of water-based greenery and also wide-canopied trees. Presence of office, universities, commercial complexes and residential zones will be able to be benefitted from the lake with its development to fulfill their recreational needs and when there will be flow of people around the lake it will not be poorly maintained anymore. There is already an existing boat transportation in this part of the lake.

WEAKNESS- The two walkways on either side of the lake contradicts each other in size and quality of the pave. The walkway facing badda has no shading trees and the middle income group of people living there barely comes down to the lake edge for their recreation. The walkway facing the high-income group of people in Gulshan is properly paved, but is of 5' and has not walkway light. The walkway is congested and lacks connection with the neighboring residential buildings and thereby lacks security as well. The ghat has a very informal seating and people does not have any seating around it to enjoy the lake for their refreshment. Overall the lake lacks connectivity and activities with the surrounding and the people whereas it is right beside the very newly developed hatirjheel.

OPPORTUNITIES- Implementation of water-based facilities and amenities will revive the activities around the lake and would bring life to its scenario. Students from surrounding universities, office workers from surrounding offices and dwellers from the residential zones would definitely come to enjoy the lake. There could be a possible connectivity with Hatirjheel in its termination point which would increase its attraction and usability in terms of land-water-activities. Boat rides connecting throughout Gulshan and Hatirjheel is another water-based possibility. With involvement of community activities and public participation the lake can be restored and maintained well and the ecological balance can surely return with would break the vicious human-intervention cycle and be a safe home for all the flora, fauna and human being themselves.

THREAT- Once the proposed road will be built, the current activities of the lower-income group with their slight vegetation and their children using the lake edge as a playfield will be stopped permanently. When that happens the lake's condition will worsen in terms of water quality and more dumping of dirt will occur. The lake would lose the permanent loss of pedestrian access and their activities and the remaining natural situation the water and ecology. Dumping will cause water to get stagnant resulting in algae growth which would induce bad smell even when once is using the driveway. The existing slight presence of natural habitat would eventually not be around anymore.

The site demands the mixed use of different amenities that is land-water based, amenities that would connect the either sides of the lake every way possible. The waterfront can be developed by analyzing current uses of the lake corridor and identifying missing links that may be beneficial to the city. The inventory and analysis concluded that there are three main elements that the design will be focused around ecological renewal, reconnecting to the lakefront, and linking social and cultural facilities by introducing docks, water-based transportation, accessible public spaces and water-recreational activities



fig 2.5



fig 2.6



fig 2.7



fig 2.8



fig 2.9

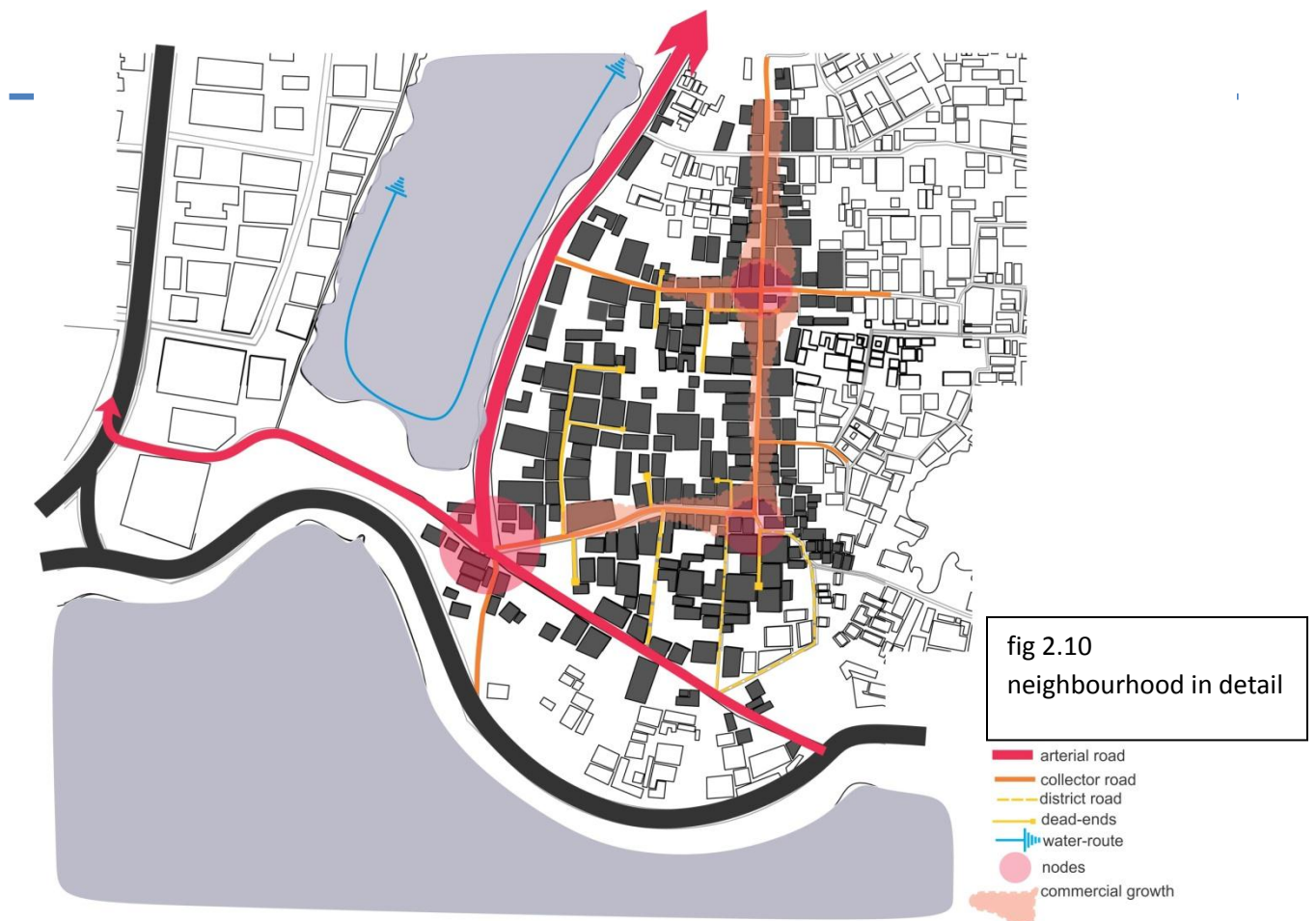
Site at a glance





FINDINGS ALONG THE WATER EDGE

fig 2.9



There is an abrupt growth of housing and their own economic centres in the Badda neighbourhood; the dwellers have introduced elements and designed their neighbourhood according to their own needs and necessities. However, South Badda, in its own process of growth has lost the presence of open spaces, community hubs, green spaces and the lost physical and psychological connection with the Gulshan Lakefront.

A chunk of neighbourhood with an area of 4.5 acres is selected within the study zone that has been remodelled with an attempt to provide some new visions for the Badda community.

PROBLEM ANALYSIS

EXISTING

1. Unplanned commercial growth
2. Loss of green space
3. Absence of community hubs.
4. Buildings along lake creating "wall" effect.

ASSUMPTION

1. Inefficient use of economic factors.
2. Lost ecological balance
3. Supressed community events.
4. Lost physical and psychological connectivity with the lake

CHAPTER 03_ Literature review

“ A chemistry of land and water- that’s what makes the deltaic landscape that we inhabit, and from where we draw our sustenance. Dhaka is a product of that.

Distinguishing it from other cities, the most critical aspect of Dhaka is defined by its situation in the most dynamic and fluid landscape in the world. Choreographed by the immensity and kinetic’s of water flow, the Bengal Delta describes a land-water formation that is in a constant state of flux. It is more apt to describe that as a hydrological or liquid landscape rather than geological or topographical one. Such a liquid landscape challenges the very idea of what is a “site” or “land” . What the last 50 years or more of prescribed planning model, including the furious development today , failed to understand is the fundamental quality of Dhaka as an integral part of that hydro-ecological landscape. Subsequently, all policies blindly adopted a land-based planning, diverting attention away from what should be the most crucial and critical planning parameter: the chemistry of land and water”

Kazi Khaleed Ashraf, Designing Dhaka-A Manifesto For a Better City, 2012 (p. 82)

The fact that our country is a riverine piece of land and our capital Dhaka is also webbed with channels of several water bodies surrounding it and also weaved in its entity, it is vital that our city should have its growth along with its water edges and the pattern in which the city would further grow in the future must grow along with the growth of the urban tissue moulded around the water edges.

“Unlike a master plan, a vision process does not lock a project into a prescribed solution. It is a citizen-led initiative that outlines a set of goals—ideals to strive for—that set the stage for people to think boldly, make breakthroughs, and achieve new possibilities for their waterfront. Because a vision is adaptable and can be implemented gradually, starting with small experiments, it often becomes bolder as public enthusiasm for making changes builds and the transformation of the waterfront gains credibility.

PPS has found that an effective way to structure a vision process is to set a goal of creating ten great destinations along the entire waterfront, an idea we call the “Power of Ten.” This focus on destinations, rather than “open space” or parks, enables a genuine community-led process to take root. Once ten destinations have been identified, then nearby residents, businesses, community organizations and other stakeholders begin to define the uses and activities they

want to see at each place. Ideally, each destination should provide ten things to do, which creates diverse, layered activity, ensuring that no single use will predominate. This process is open-ended—so that the result can fulfill the hopes of people involved in the process. This cannot happen when it is assumed from the outset that the goal is to build, say, a park, which may narrow the range of possible outcomes and prevent some of the best ideas from ever seeing the light of day.

Great waterfronts are not dominated by residential development. Why? Because these are places that are full of people, day and night. They are the sites of festivals, markets, fireworks displays, concerts and other high-energy gatherings. A high concentration of residential development limits the diversity of waterfront use and creates constituencies invested in preventing 24-hour activity from flourishing.

An iconic structure can be a boon to the waterfront, so long as it acts as a multi-use destination. On a recent weekend morning in Stockholm, the busiest building along the waterfront was the City Hall. Surrounded by a plaza, park, and courtyards, the building shares its slice of the waterfront with a major pier where boats offer waterfront tours. Clearly, this City Hall is more than a one-dimensional icon, it is also a good neighbor with a strong sense of place. Today's icons should strive to achieve the same flexibility and public-spirited presence.

Ongoing management is essential to maintain waterfronts and sustain a diverse variety of activities and events throughout the year. Waterfronts could adopt the model of the Business Improvement Districts that have been so successful in many downtowns. A "WID" could forge partnerships between waterfront businesses and organizations and those in the surrounding district, so that waterfront programming—such as temporary exhibits of local artists or music by local musicians—reflects the community and gives the place a unique character."

How to Transform a Waterfront Retrieved from March 2014

In many urban cities there is little connection between the ecology of a river and its urban dwellers. Many urban settings include built infrastructure with poor connections to natural elements and/or paying little attention to the river. Cities seek a waterfront that is a place of public enjoyment. They want a waterfront where there is ample visual and physical public access – all day, all year - to both the water and the land. Cities also want a waterfront that serves more than one purpose :they want it to be

a place to work and to live, as well as a place to play. In other words, they want a place that contributes to the quality of life in all of its aspects – economic, social, and cultural

Why is there a missing connection between the river and its urban setting?

Is it because cities have turned their back away from the river? How can landscape architecture help urban communities reconnect to a river?

An ecological restoration can restore the missing link between people and a river. Creating areas of interest and activities through green space design can create opportunities for storm water infiltration, alternative transportation uses, and educational elements. The goal is to use the river corridor to unify urban communities and in doing so, promote a sustainable future for our ecosystem while providing economical and cultural growth.”

Reconnecting to a Forgotten River-An Ecological Solution

Design Thesis | Aaron Hanson; Department of Architecture and Landscape Architecture of North Dakota State University , May 2012

This extract of the research paper by Aaron Hanson interrogates the connection of urban grown and setting with the river and gives an insight to the different uses that a water body might come to in contribution to a city. This research paper has dealt with reconnecting a small city to the Mississippi river.

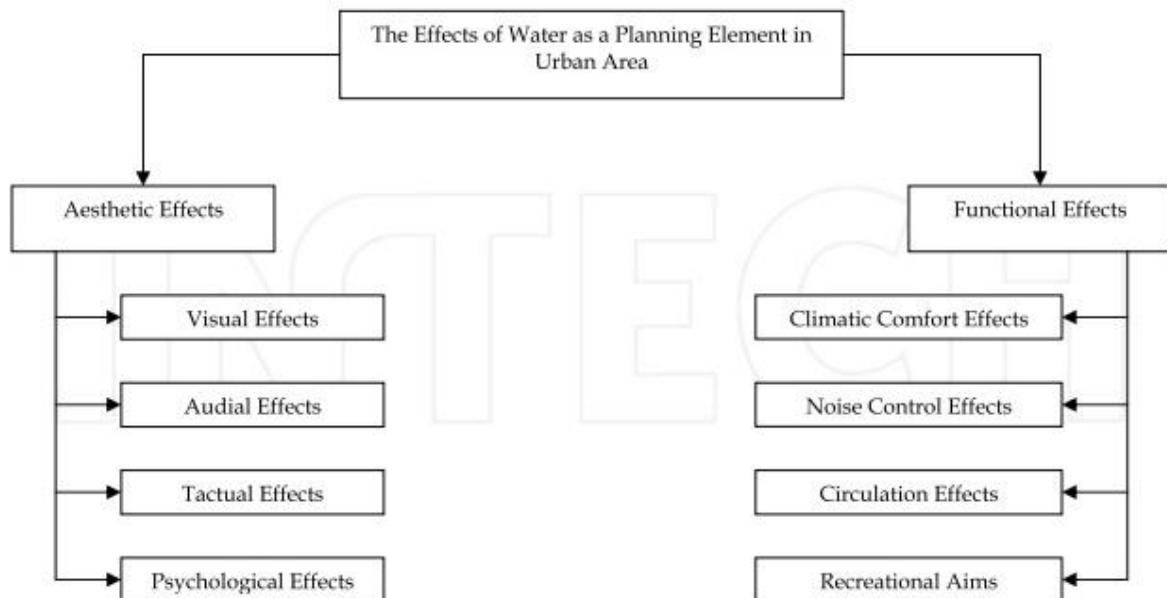
“Water organizes community

Analysis of Dhaka's disappearing water bodies shows the urgency of their re-vitalization and re-integration in the dense urban tissue in order to re-establish the city's ecological balance as well as heighten community life. For the lake straddling Banani and Korail, provision of a basic level of infrastructure and services stimulated new economic and social activities. At strategic points inside the existing urban tissue, public 'voids' are inserted to provide some breathing space and encourage the development of economical as well as cultural, civic and educational facilities (Linde Van Rath, University of Leuven, Begium 2009)”

Kazi Khaleed Ashraf, Designing Dhaka-A Manifesto For a Better City, 2012 (p. 88)

With time every water body changes its geographical position in the earth's body. That is the reason why water bodies in our city has also shifted and also disappeared due to human intervention. It is very crucial to restore and save these water bodies to balance the ecology and also provide a breathing space and promenade around the water bodies, Only with public support and maintenance of these water bodies and providing certain water-based amenities and also transportation can save these water bodies from extinction.

“One reason for the importance of natural water source in urban area is aesthetic effects which creates on human. These effects are visual, auditory, tactual and psychological effects. The primarily power of attracted people on waterfronts is visual landscape effects of water on relaxation. Throughout, designs related to water takes over motion and serenity factors. Moving water (Figure 2a) (waterfall, cascade rivers and etc.) adds vibrancy and excitement to a space. Stagnant water (Figure 2b) creates the mirror effect in its space as a visual (Önen, 2007). Aksulu (2001), water is used commonly as reflection element by means of the optical properties. Wide and quiet water surfaces bring in serenity and deepness to its surrounding or a space. Beside deepness effect of water gives more widening feeling of in living area. Also, the various light games is formed on this surface (Hattapoğlu, 2004).”



Throughout history, waterfronts are the most ideal living area for human being to be able to provide food, settling, reproduction, defence and learning etc. So, the many cities or towns are established water's edge from the history of civilization to until today. Uruk, Erudu, Ur and Babylon are an examples for early settlement about 6000 years ago (Hamamcioğlu, 2005; Morena 2011). In case nowadays, the many cities or towns in China, England, Italy and America can be given as an example of waterfront settlement (Zhang, 2002).

Urban waterfronts have historically been the hub of transportation, trade and commerce (Letourneur, 1993). Rafferty and Holst (2004), they are always connected with close by means of reflecting immediately any change in social, economic, industrial environmental.

Historically, waterfronts aren't planned carefully and consistently. Growth had been inceasing and disconnected as a result, synthesis of numerous enterprise, activities and decisions of political authority. Thus, every urban waterfront has its special history (Akköse, 2007)."

Umut Pekin Timur

Çankırı Karatekin University, Faculty of Forestry,

Department of Landscape Architecture,

Çankırı, Turkey Retrieved from February 2014

This piece of writing depicts the aesthetical and functional impacts that a water body has on the human beings. Aesthetical impacts create a feeling and sense of emotion in the human mind whereas these intangible impacts bring about usability in different forms when it comes to functionality of water bodies. Ancient history has the proof how a city and its livelihood, economy and recreational growth has took place around the water edge over time and how the human life and the balance of nature is dependent on water and water bodies.

"The edge should belong to the public with full and uninterrupted access. Land –water edge is encroached because we do not know what to do there other than throwing sand or dumping wastes. A clearly defined language of walkways and promenades dedicated for public use can give structure and order to the use of the river edge."

Kazi Khaleed Ashraf, Designing Dhaka-A Manifesto For a Better City, 20012 (p. 100)

Edge treatment is a crucial factor to be considered while thinking of treating any waterfront. The reason being edge is the place where the land meets the water. Needless to say the exchange of the hardness of the land with the softness of the water takes place there and thereby edges needs to comes to proper use when it comes to functionality or even human recreation and aesthetic purposes.

“High and dry in the long hot day

Lost and lonely every way

Got the flats all around me sky up above

Yes I need a little water of love

I've been too long lonely and my heart feels pain

Crying out for some soothing rain

I believe I have taken enough

Yes I need a little water of love

Water of love deep in the ground

But there ain't no water here to be found

Some day baby when the river runs free

It's gonna carry that water of love to me.....”

Song-Water of Love, Written by-Mark Knopfler (Band- Dire Straits),

Album- Down To the Waterline 1978

Water is universally perceived as a favorable element. More than anything else, water is a source of life and great symbol for life (Moore, 1994). It is determined to be critical for human survival. It is considered powerful, and it has been here, in relatively the same quantity and form since the planet’s beginning. In the landscape, water is a common and abundant element not unlike earth and rock. But what distinguishes water from other landscape elements is its unique ability to be molded, sculpted and re-channeled. The fluidity of water, its clarity gives the human mind a sense of clarity as well and helps the human mind get go off the rigidity for a while. Water also gives the human mind a sense of calmness and serenity. The concept of calmness, clarity, and purity has been narrated by human being in the timeline through music, poems, paintings and through many other forms of expression.

“...Our lives are diminished if we cannot establish rich and abiding contact with water. But of course, in most cities we cannot. Swimming pools, lakes, and beaches are few in number and far away. And consider also the water supply. Our only contact with this water is to turn on the tap. We take the water for granted. But as marvelous as the high technology of water treatment and distribution has become, it does not satisfy the emotional need to make contact with the local reservoirs, and to understand the cycle of water: its limits and its mystery”.

A Pattern Language, Architect- Christopher Alexander 1977 (p.324)

Human contact with water has been in the natural landscape, in human made water features, and more recently, in commercial water parks and gardens. Because of its lasting quality, human are in contact, both actually and symbolically. Themes of life, re-birth, renewal and energy resound through all the literary and scientific recordings. This leads one to consider that the meaning of water is intricately connected with the theme of survival or the perpetuation of human species. If this is so, then water in the landscape is a powerful symbol with universal appeal, since it conjures up very primitive notions. This notion of celebrating life presents a unique opportunity to those who design the landscape, for it provides an enduring connection between people and water. Water in the environment will not go out of style. The imperative then becomes how we can design in order to impart the greatest and most enhanced meaning in the landscape, and evoke the most intense experience for the user.

The Human-Nature Connection

Designing cities within their natural ecosystem is not only important because it forces civilizations to have environmentally friendly principles like stormwater management, sustainable design of buildings and landscapes, etc., but also because it provides contact with nature. Interaction with nature has been proven to enhance human well-being and development. According to Kellert (2005), “Human physical, mental, and even spiritual well-being relies on experiencing healthy and diverse natural systems” (2005, p. 9). When creating natural ecosystems within an urban setting, designing for interaction with nature will be a key element for a city’s success.

CHAPTER 05_ Contextual analysis

Bangladesh is a water-based country with many of the economical, commercial and recreational activities taking place around the water bodies. Dhaka is like an island surrounded by three rivers, the Buriganga, the Turag and the Balu river. There used to be a time when the Dhanmondi lake used to be connected to the Turag river. It is obvious that the geographical position of these water bodies has changed with time and mostly by human intervention in the nature. Since Dhaka is a “deltaic city” it cannot be improved only by developing the economical aspects. Raising flyovers and high-rise buildings only seem to re-clutter the traffic and human congestion and it also blocks the spatial view. To develop our city and make our environment lively it is important to treat the edges of our water bodies which must have full accessibility to the public.

“Gulshan” a Persian word, that means flower garden but our Gulshan lake is nothing but a dirty sanitary and washing pool. The DIT had the responsibility of beautifying it, and retaining it as a flower garden surrounding the lake. In contrast, a multistoried building has been built a few feet away along side the lake’s eastern shore. Otherwise it is surrounded on both the east and west shores with slums. For these residents the Gulshan Lake is their washroom, toilet, as well as a source of household water. Only certain stretches alongside Baridhara, across the US embassy building, is protected with boundaries and is a decent piece of open green land.

Social aspects-

The primary power of attracting people on waterfronts is visual landscape effects of water on relaxation. Throughout, designs related to water take over motion and serenity factors. Moving water (waterfall, cascade rivers and etc.) adds vibrancy and excitement to a space. Stagnant water creates the mirror effect in its space as a visual. When a defined waterfront is created it will induce the people around to enjoy the place and the use of the lake by the people for their recreation, refreshment or even transportation it is going to attract even more people from the city thereby creating the place’s own functional “identity” re-establishing the social bond that is lacking in the current scenario of our city. By enhancing the use of boats the entire Gulshan lake can be connected at some places and most importantly it can be connected to Hatirjheel which is going to boom the water festivity around Gulshan 1.

Economical aspect-

The Gulshan lake is being webbed through different edges of Banani, Gulshan, Baridhara, facing a variety of elements starting from commercial buildings, dwellings, institutions and even slums. The condition of the lake is almost the same throughout its whole body and has no such identity in terms of zone or use. There are boat facilities for the low income group of people to cross the lake from either sides but a boat needs a place to moor -- in a marina, or along a dock, or anchored at the water body. Henceforth people on the boat will want to go somewhere on land and people on land will want to connect with the water -- this edge between the water and land is the waterfront, which can be filled with marinas, ecological reserves, lively public spaces, shops, industrial ports, and other water-land activities. While one successful waterfront may be enough to attract a small fleet of boats, the most successful boating areas include a network of attractions accessible by sea, and often connected by land transportation, to make a region a boating destination. One cannot simply have a boat without the infrastructure and activities needed to support it. So along with the boat will come stepped dock lining any edge of the lake

CHAPTER 04_ Case Studies

case study #1

Above The Falls

Location | Upper Mississippi River, Minneapolis, Minnesota

Involvement | Lead by BRW, Inc. (A Dames & Moore Group Company)

Others: Robbin B. Sotir & Associates, Inc., Anton & Associates, Inc., and McComb Group, Ltd.

Scale | 90 acres of park, 15 miles of bike lanes and recreational trails, 4 miles restored riverbank, 5.25 miles of parkway and boulevard, 2,500 housing units

Completion | Implementations for first phase began in 2009

Objectives

- Provide public access to river.
- Create a system of riverway streets.
- Enhance the ecological function of river corridor.
- Link upper river to Grand Rounds parkway system.
- Realize the area's potential for economic development.
- Establish urban design guidelines

Above The Falls (ATF) is a preferred plan that the city of Minneapolis has taken on and includes features such as a new neighborhood on the west bank, a pedestrian promenade along the river, the West River Parkway that acts as buffer between uses, opportunities for entertainment and hospitality destinations, mixed-use and higher-intensity development, a BN bridge converted into a pedestrian and bicycle facility, and rail use.

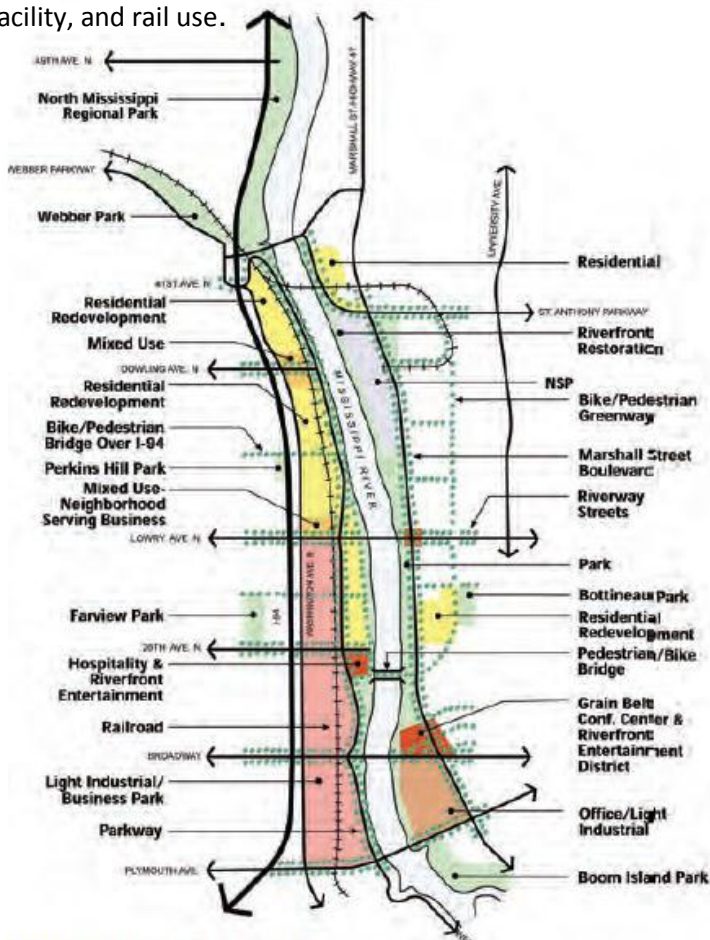


Figure 17. ATF, 1999. The preferred plan.

CHAPTER 05_ Contextual analysis

Bangladesh is a water-based country with many of the economical, commercial and recreational activities taking place around the water bodies. Dhaka is like an island surrounded by three rivers, the Buriganga, the Turag and the Balu river. There used to be a time when the Dhanmondi lake used to be connected to the Turag river. It is obvious that the geographical position of these water bodies has changed with time and mostly by human intervention in the nature. Since Dhaka is a “deltaic city” it cannot be improved only by developing the economical aspects. Raising flyover and high-rise buildings only seem to re-clutter the traffic and human congestion and it also blocks the spatial view. To develop our city and make our environment lively it is important to treat the edges of our water bodies which must have full accessibility to the public.

“Gulshan” a Persian word, that means flower garden but our Gulshan lake is nothing but a dirty sanitary and washing pool. The DIT had the responsibility of beautifying it, and retaining it as a flower garden surrounding the lake. In contrast, a multistoried building has been built a few feet away along side the lake’s eastern shore. Otherwise it is surrounded on both the east and west shores with slums. For these residents the Gulshan Lake is their washroom, toilet, as well as a source of household water. Only certain stretches alongside Baridhara, across the US embassy building, is protected with boundaries and is a decent piece of open green land.

Social aspects-

The primary power of attracting people on waterfronts is visual landscape effects of water on relaxation. Throughout, designs related to water take over motion and serenity factors. Moving water (waterfall, cascade rivers and etc.) adds vibrancy and excitement to a space. Stagnant water creates the mirror effect in its space as a visual. When a defined waterfront is created it will induce the people around to enjoy the place and the use of the lake by the people for their recreation, refreshment or even transportation it is going to attract even more people from the city thereby creating the place’s own functional “identity” re-establishing the social bond that is lacking in the current scenario of our city. By enhancing the use of boat the entire Gulshan lake can be connected at some places and most importantly it can be connected to Hatirjheel which is going to boom the water festivity around Gulshan 1.

Economical aspect-

The Gulshan lake is being webbed through different edges of Banani, Gulshan, Baridhara, facing variety of elements starting from commercial buildings, dwellings, institutions and even slums. The condition of the lake is almost the same throughout its whole body and has no such identity in terms of zone or use. There are boat facilities for the low income group of people to cross the lake from either sides but a boat needs a place to moor -- in a marina, or along a dock, or anchored at the water body. Henceforth people on the boat will want to go somewhere on land and people on land will want to connect with the water -- this edge between the water and land is the waterfront, which can be filled with marinas, ecological reserves, lively public spaces, shops, industrial ports, and other water-land activities. While one successful waterfront may be enough to attract a small fleet of boats, the most successful boating areas include a network of attractions accessible by sea, and often connected by land transportation, to make a region a boating destination. One cannot simply have a boat without the infrastructure and activities needed to support it. So along with the boat will come stepped dock lining any edge of the lake

and other amenities as well which would surely generate revenue and provide a strong economical support.

Human psychological aspects-

The balance is established between nature and social life for a sustainable development of cities. Urban natural water elements play an important role in the establishment of this balance. Water is the most important planning element which is comfort of human physical and psychological. In addition, it brings existing environment in a number of features in term of aesthetic and functional. One reason for the importance of natural water source in urban area is aesthetic effects whose creates on human. These effects are visual, audial, tactual and psychological effects.

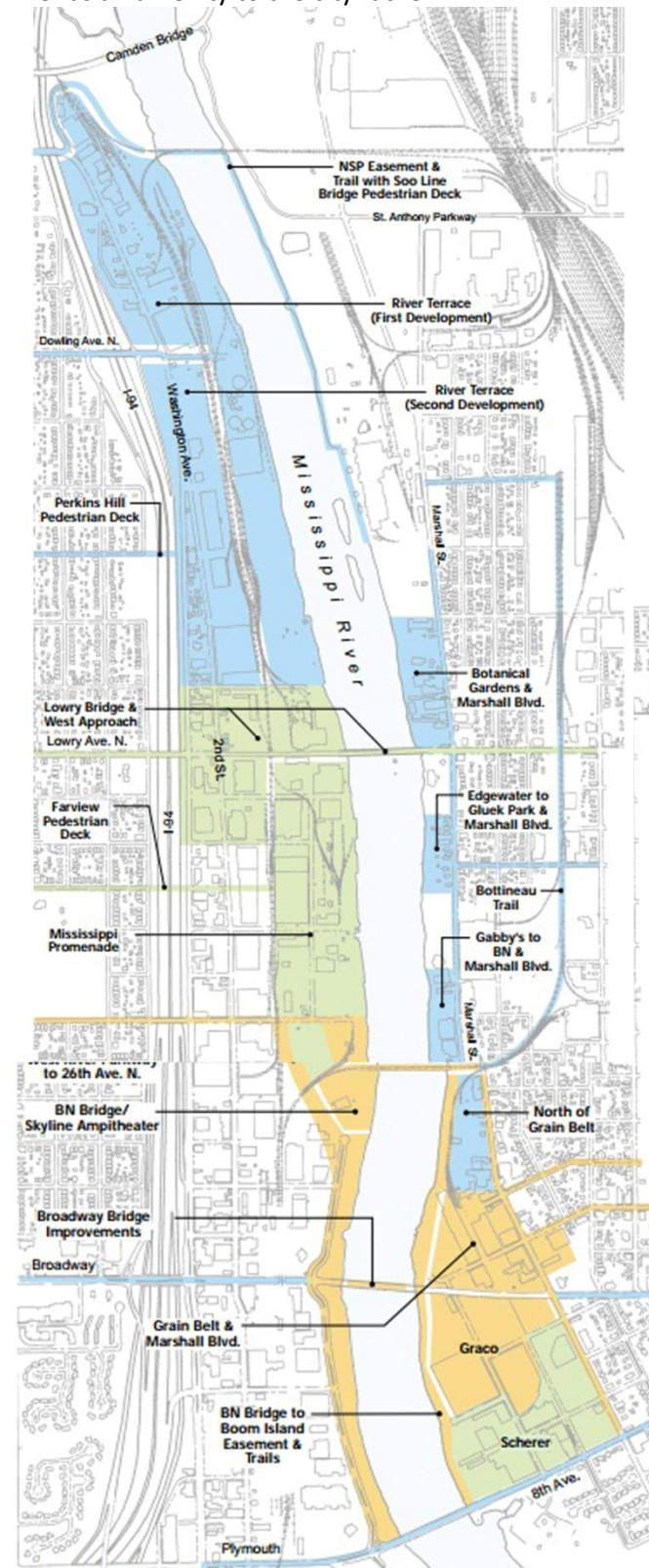
Ecological aspect-

When the lake will the properly used and being loved by the people, they will be eager to maintain it for generations to come and for the betterment of the lake. Maintenance of the lake would primarily include keeping the water clean and keeping its nutrients balanced for the natural water habitat to support its flora and fauna. Every living things in this ecosystem is dependent on each other for their livelihood and existence. We definitely need to protect our environment for a better tomorrow and it is our responsibility to keep our city clean and healthy.

According to the Minneapolis Park & Recreation Board, in the last decade, the ATF project has “captured the attention of a citizenry anxious to reconnect to the world-reowned river that has so influenced the city’s history.” The plan has successfully created a vision for the banks of the Mississippi River in Minneapolis. Its vision will allow for residents to enjoy the urban waterfront with recreation and social development. By providing locations for lively riverfront entertainment and hospitality sites, it will take full advantage of looking at the river as an amenity to the city rather than only a resource.



Figure 22. ATF, 2006. Orvin “Ole” Olson Park, located towards the north end of project area. Vision for the park is to be the southern terminus for intensely redeveloped mixed-use



Overview

ATF is a bold vision for developing the Mississippi Riverfront into a regional park amenity for north and northeast Minneapolis (ATF, 1999). Building a strong connection between the central waterfront and the northern corridor will provide multiple benefits for Minneapolis. ATF recognizes the need to replace heavy industrial industries along the river that pose land-use conflicts. The surrounding neighborhoods have blocked views and access to the poorly developed waterfront. When people do make it to the water's edge, one can see an environmentally degraded riverfront, unpleasing to the eye. This has caused a lack of demand to use and be part of the urban waterfront. However, according to BRW Inc., the opportunity is clear and simple: "There is only one Mississippi, and the Upper River is the best potential large-scale amenity awaiting development in the city of Minneapolis."

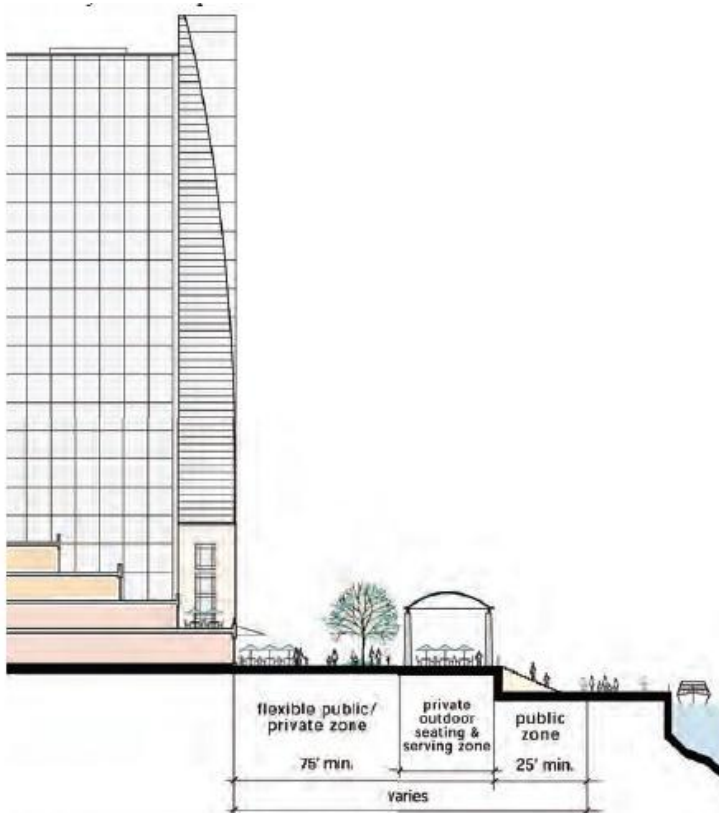


Figure 18. ATF, 1999. River City, located south of 26th Ave. This area offers residential high-rises, parkway, water filtration park, and a riverfront promenade.

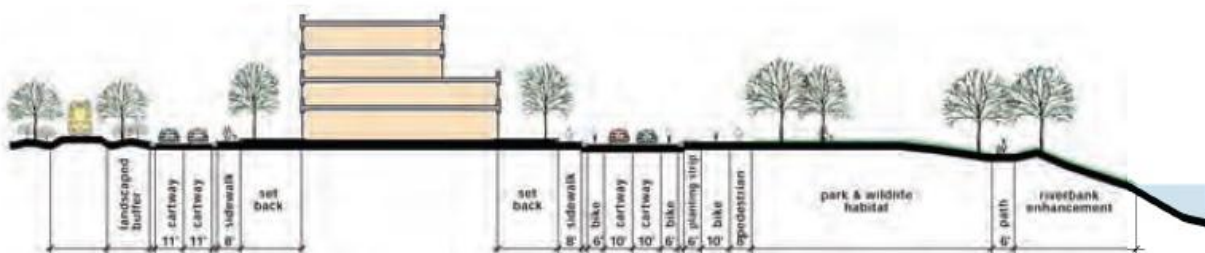


Figure 20. ATF, 1999. West River Parkway South of Dowling Ave.



Conclusion and thoughts

This case study is a good example of how a design intervention is taking place along the Mississippi River in the similar climate of my proposed project area, Gulshan 1. Above The Falls plan shows the importance of bringing the inter city out to experience the urban waterfront. The way this plan has phased out its design interventions is a strategy I may use when developing my design proposal. The Above the Falls case study is a good example to show the importance of bringing people out of the downtown to enjoy the waterfront. Similarly to Gulshan lake, ATF recognized the poorly developed water's edge and riverfront access and changed the riverfront in ways to draw the community to their forgotten river. This recognition allows opportunities for families to participate in outdoor recreational activity. This activity will bring people closer to nature and enhances physical, spiritual, and mental well-being. Continuing development of the ATF master plan shows the strategy of focusing on immediate impact areas that won't be affected by future designs. This is important to be aware of in order to be cost effective and to provide a hierarchy of important elements needing to be accomplished.

case study #2

BEIRUT MARINA - ZAITUNAY BAY

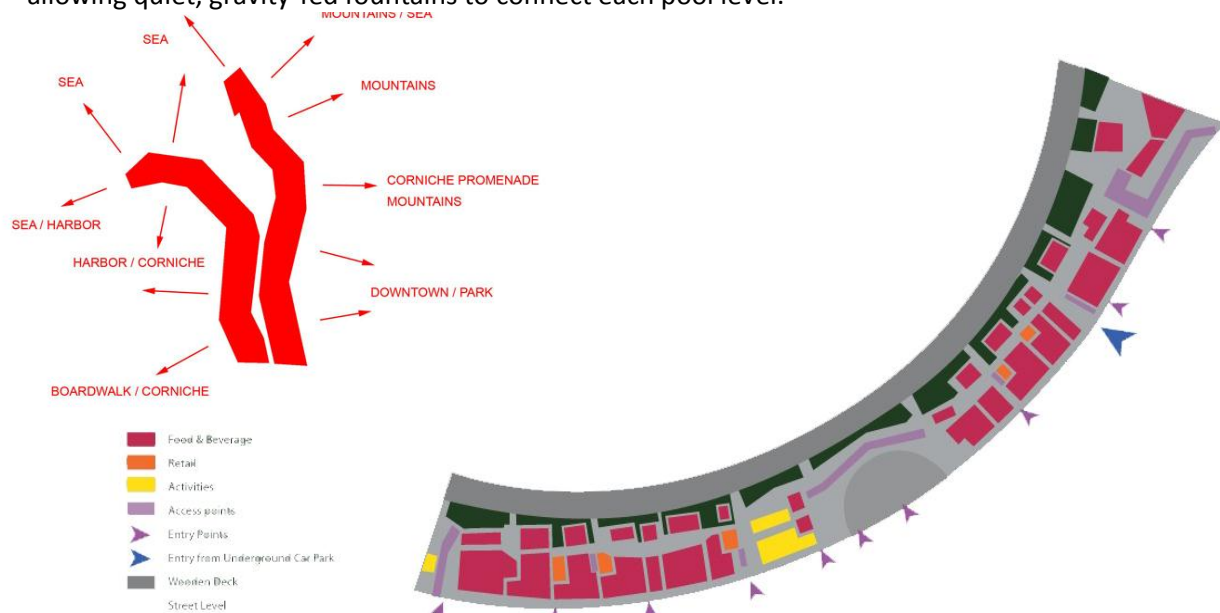
Beirut, Lebanon, 2002-2014

PROGRAM: apartments, restaurants, outdoor public spaces with site specific art installations, specialty stores, harbormaster, yacht club, and public facilities

CLIENT: Solidere

SIZE: 220,000 sft

Location | in the heart of Downtown Beirut, the site for the new Zaitunay Bay extends the existing Corniche along the seashore into a series of overlapping platforms. The Corniche is inflated to create an 'urban beach,' with levels subtly articulated to provide outdoor spaces with public areas for artwork. The concept takes its shape from strata and layers in forking vectors. Like the ancient beach that was once the site, the planar lapping waves of the sea inspire striated spaces in horizontal layers, as distinct from vertical objects. The horizontal and the planar become a geometric force shaping the new harbor spaces. The form allows a striated organization of public and private spaces which includes apartments, yacht club, public facilities, harbormaster, restaurants, and specialty stores. The syncopated rhythm of platforms is achieved by constructing the overall curve of the Corniche in 5 angles relating to 5 reflecting pools. Due to variations in height along the Corniche, the platform levels and pools vary slightly in height allowing quiet, gravity-fed fountains to connect each pool level.



This sea side walk which is recently updated to be an upscale yacht club and water front promenade, is where one can feel the lively and lovely Lebanese life style, every morning lots of people are there for morning run and in the mid day its full of excellent restaurants, local and international, there is a water sports center and Yacht club for those who are interested. One can not leave the city without seeing this place.





Top left- Elevating the seating from the walkway a little higher to create a floating effect.

Top right and lower left - The rails and every other signage has the use of one single material which is metal and porosity is created in terms of views. Every changes in the journey throughout the bay is being showed through signs that are engraved within the erected porous metal sheets.



**Conclusion and thoughts**

The Zaitunay Bay is aesthetically pleasing because of all the different views one can perceive in the area. This is something I can carry throughout the design proposal of the Gulshan lake corridor. It will be important to think about how each day can be experienced differently. This can be done by using techniques of lighting and materials to create a sense of place while incorporating the effects of each season. Another method used by the leaders of Steven Holl during the design process was using the local community. A strong sense of place is felt within the Meirut Bay today because of a strategy of only employing local people, using a holistic approach in design, and responding to the sensibility of local culture and history.

A couple areas that will be carried into my design thesis are the ways the San Antonio River connects neighborhoods along its route and the river is used for recreational purposes. Over 10 miles of walking and biking trails and water recreation have been proven to be successful as a great amenity to the city.

CHAPTER 6_ PROGRAMME AND DEVELOPMENT

Proposed projects in site-

- Begunbari Hatirjheel lakefront development
- 45feet wide one-way road lining the gulshan-badda lake

Requirement of surrounding area/city-

Community oriented and city oriented functions- Urban promenades and Community gardens.

-Shopping / Retail shops- shops that provide the basic and regular needs for the badda neighbourhood.

-Community Centre- to provide a platform for the residents of South Badda to hold their various community events such as wedding, birthday, book club, fitness club, annual cultural program etc.The community centre will serve-

As the place for all-community celebrations at various occasions and traditions.

As the place for public meetings of the citizens on various issues.

As the place where politicians or other official leaders come to meet the citizens and ask for their opinions, support or votes .

As a place where community members meet each other socially.

As a place housing local clubs and volunteer activities.

As a place that community members (and sometimes others), can rent cheaply when a private family function or party is too big for their own home. For instance the non-church parts of weddings, funerals etc.

As a place that passes on and retells local history.

As a place where local non-government activities are organised.

-Water Taxi station- with the proposal of a water taxi station already in the Hatirjheel lake, a water taxi junction can be positioned at the terminating point of the gulshan and hatirjheel lake that will give a framed lake view with the presence of a water-based promenade.

CHAPTER 7_ CONCEPTUAL STAGE AND DESIGN DEVELOPMENT

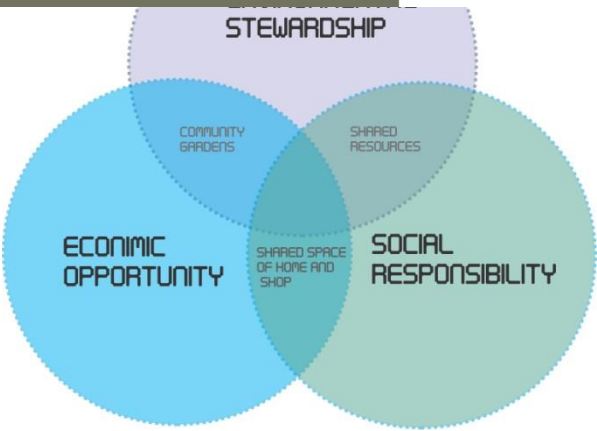
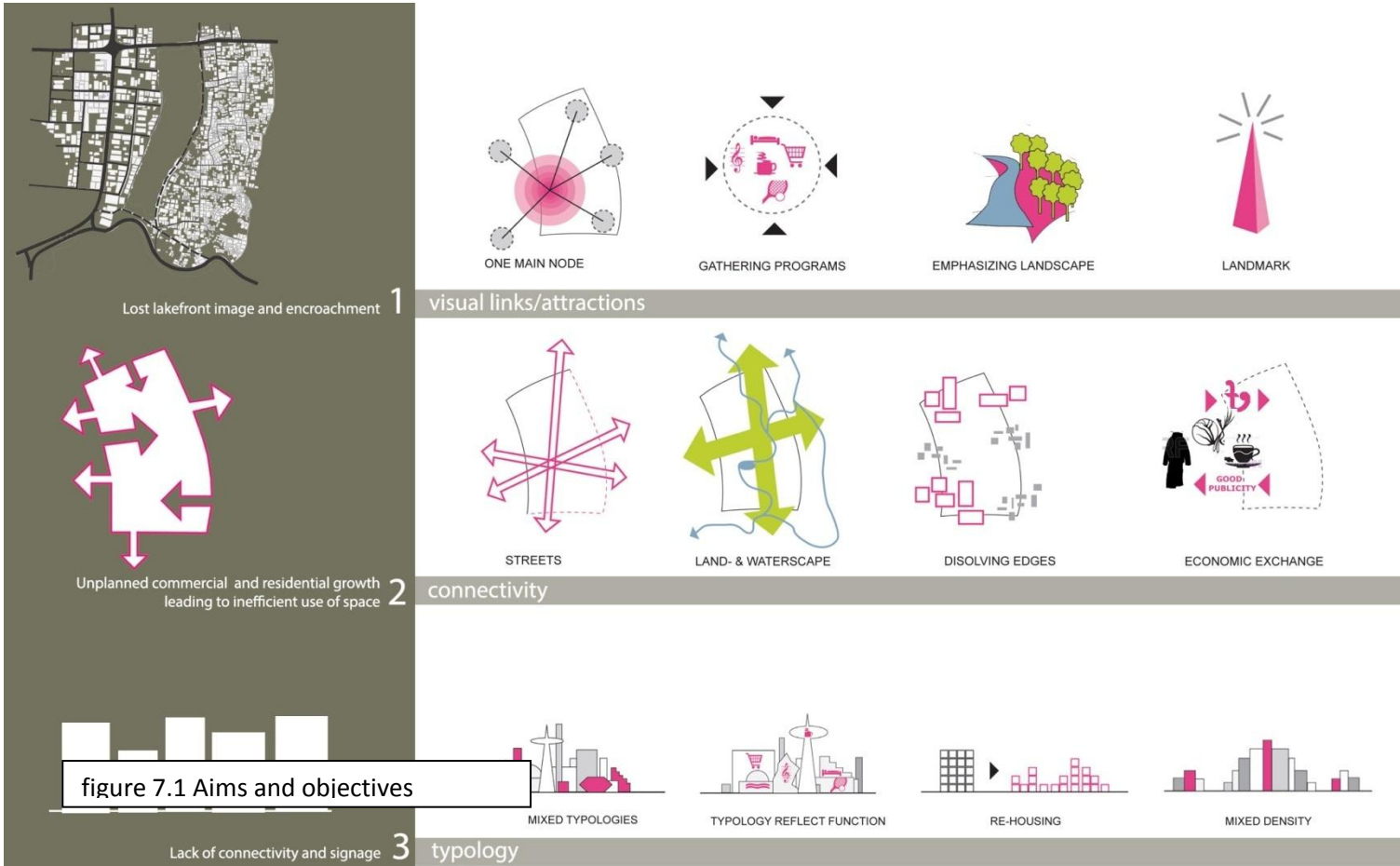


figure 7.2 Interweaving community elements

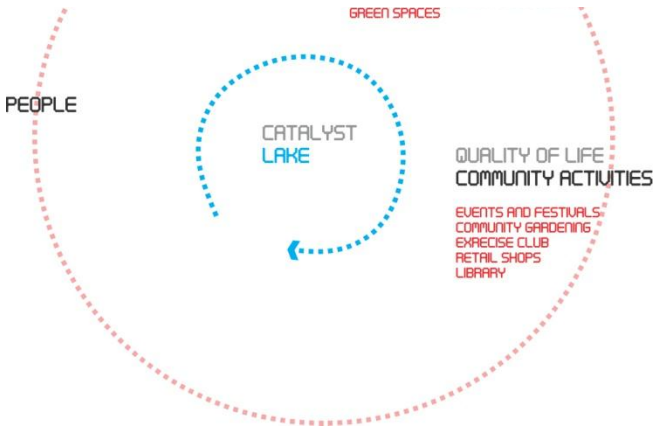
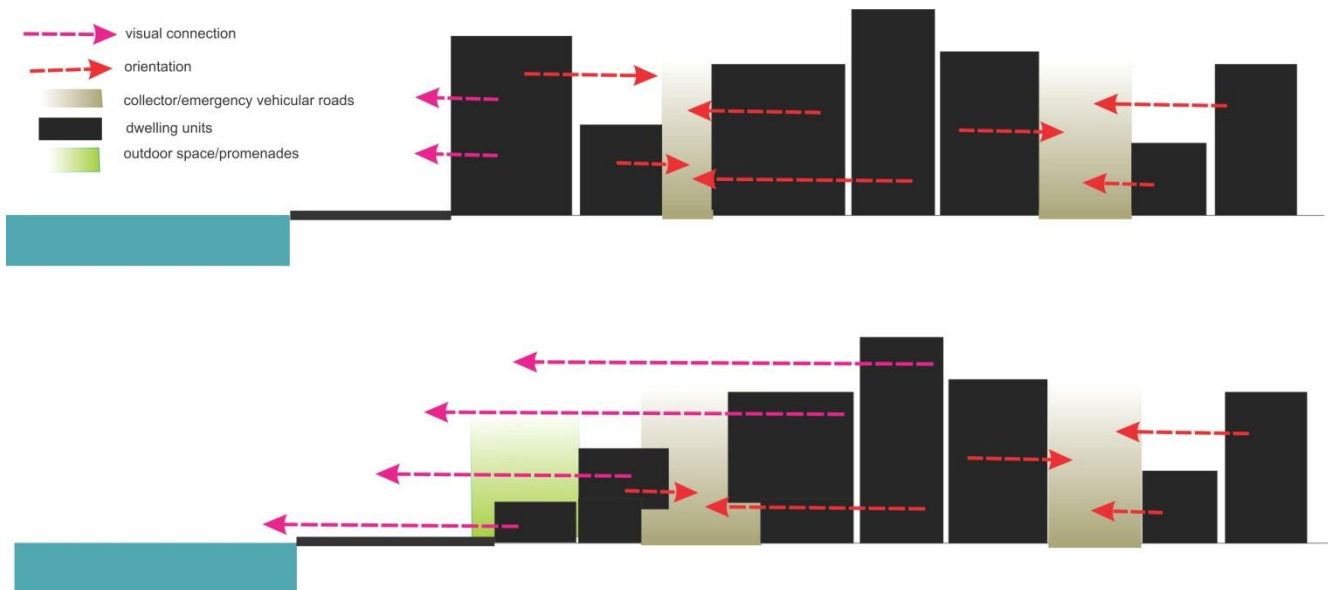
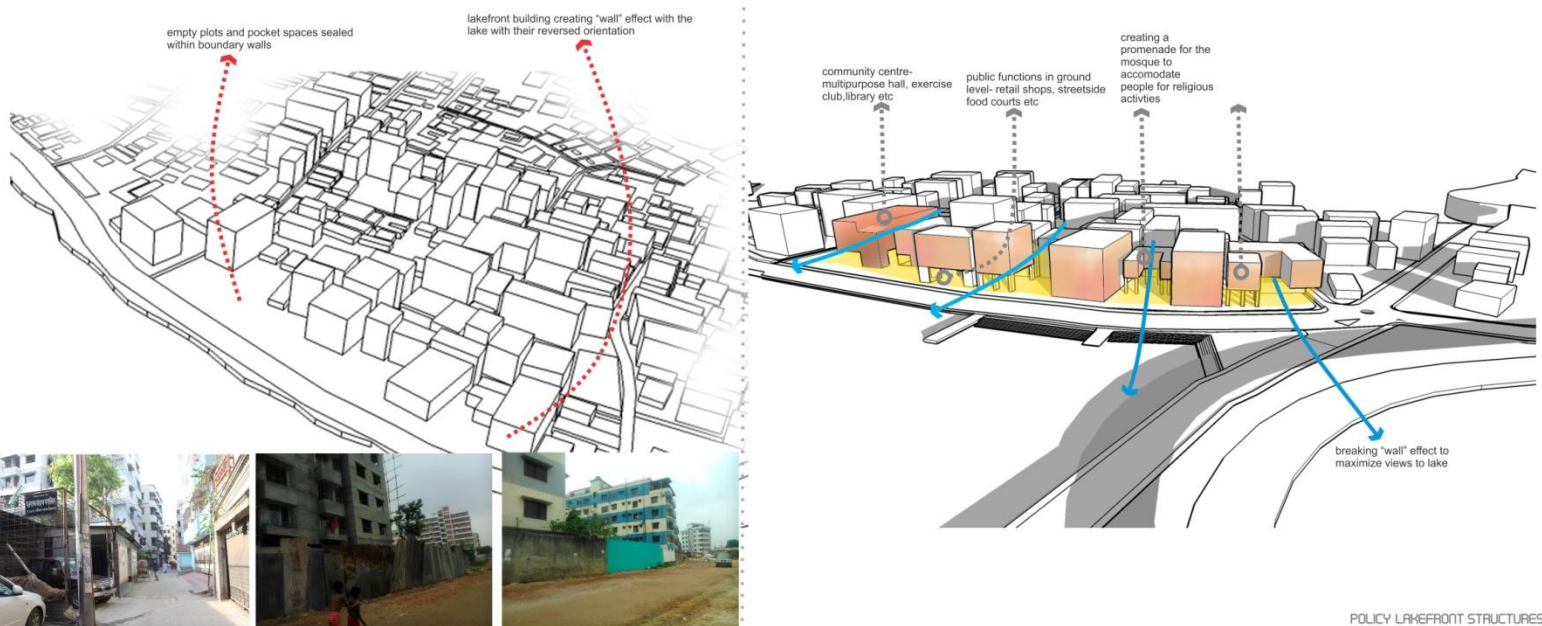


figure 7.3 the symbiosis

figure 7.4 orientation and access



The concept was to break the "wall" effect that the lakeside buildings has created between the lake and the neighbourhood. Introducing public functions like community centre on the edge the community interaction will increase amongst each other and also with the lake.



POLICY LAKEFRONT STRUCTURES

figure 7.5 policy for lakefront edge



figure 7.6
Proposed zoning

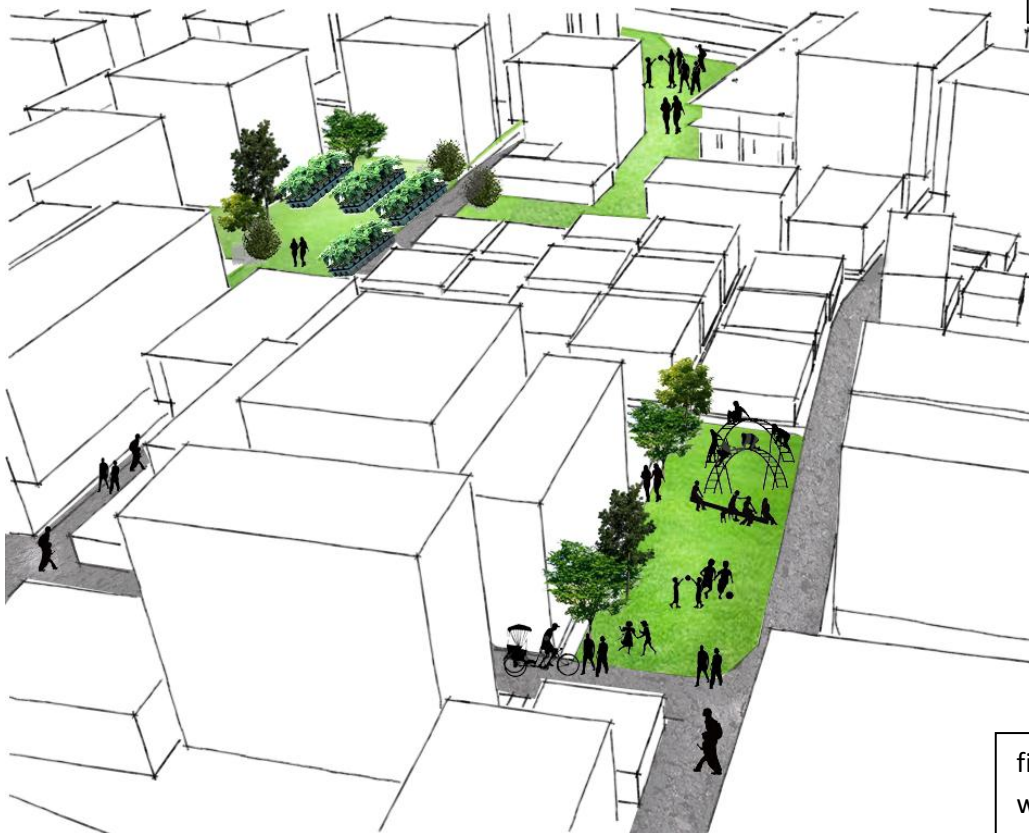


figure 7.7 internal spaces
within the neighbourhood

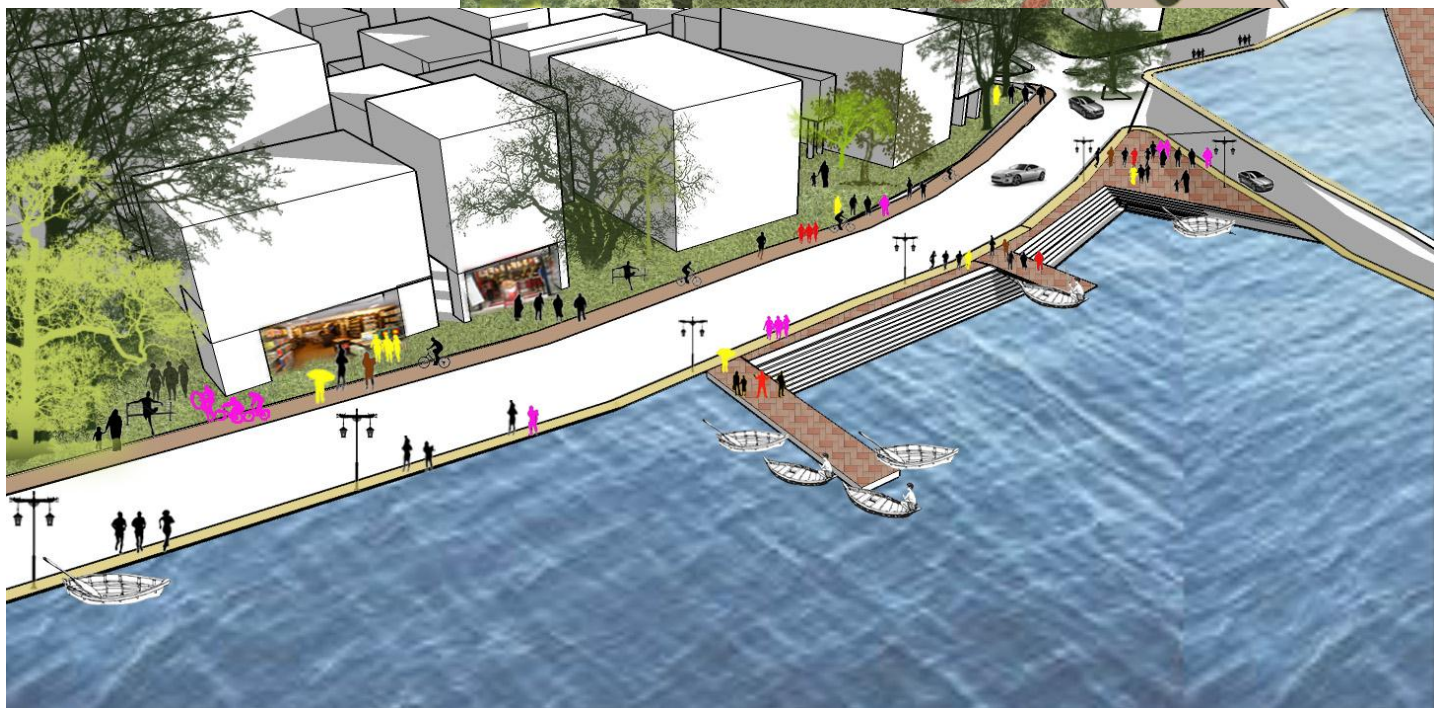
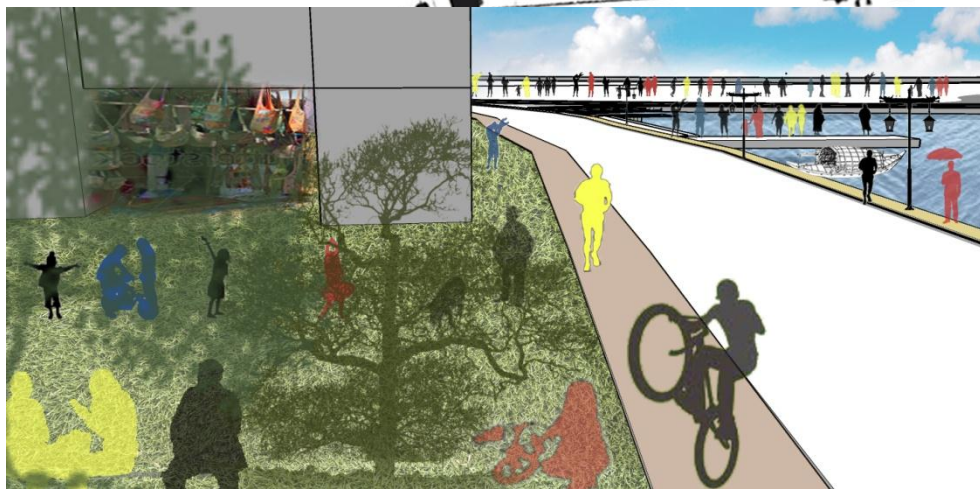
Widened internal local road to create connections with the collector road and to allow passage for emergency vehicles

figure 7.8 widened local road



VISIONS OF THE LAKEFRONT IMAGE. PERCEPTION OF THE "BADDA RHIZOME"-THE PILOT PROJECT THAT CAN BE FOLLOWED BY THE REST OF THE LAKEFRONT,

figure 7.9 and 7.10 visions



CHAPTER 8_ CONCLUSION

There is some potential for neighborhood level budgeting to other significant efficiencies through service re-design as evidenced by many of the (community-led) business cases for new days of working submitted with the operational plans. Every case however need further development and testing in practice. The most common motivation for taking up this approach in neighborhoods and communities was to gain local and community control and make decisions based on local priorities and local knowledge. There is no single model of neighborhood budgeting, instead there are multiple pathways to progress. It is important that the community is engaged at every stage of the development process but engagement can be seen as a continuum including "shallower" and "deeper" engagement. Changes of structures, priorities, incentives and behaviors of all actors is required at the local level.

There are therefore indications that neighborhood budgets are taking communities on a journey towards greater local control, improved outcomes and developing the ability to do more with less, stretching neighborhood spend.

